

### **Remarks**

Prior to this amendment, claims 1-69 were pending and claims 45 and 55-66 were withdrawn from consideration. Claims 1, 24, 44, 49, and 69 are amended herein. Claims 45 and 55-66 are canceled without prejudice. Applicant reserves the right to pursue canceled or removed subject matter in a later application. After entry of this amendment, **claims 1-44, 46-54, and 67-69** are pending in this application.

Claims 1, 24, 44, 49, and 69 were amended to correct matters of form. No new matter has been added by these amendments. Unless specifically stated otherwise, none of the amendments made herein are intended to limit the scope of any claim.

### ***Request for Corrected Official Filing Receipt***

The subject application claims the benefit of U.S. Provisional Application Number 60/145,613, filed July 26, 1999. The preliminary amendment filed with the application on January 24, 2002, which includes entry of the cross-reference to the U.S. Provisional Application in the specification, is acknowledged in the current Office action. However, the cross-reference to the U.S. Provisional Application was not reflected in the Official Filing Receipt, dated May 15, 2002.

Applicant notes that a Request for Corrected Official Filing Receipt was submitted to the United States Patent and Trademark Office on July 3, 2003, and again on July 18, 2003, in order to enter the cross-reference to the U.S. Provisional Application. Applicant respectfully requests that the Examiner acknowledge that the application claims the benefit of U.S. Provisional Application 60/145,613, filed July 26, 1999, in the next Office action, and that a Corrected Official Filing Receipt be issued.

### ***Affirmation of Election***

Applicant affirms the election of Group I (claims 1-44, 46-54, and 67-69) for prosecution in the current case. The claims of Group II (claim 45), Group III (claims 55-63), and Group IV (claims 64-66) are canceled herein.

***Amendment of the Specification***

Applicant has amended the title of the application to “Layered Device with Capture Regions for Cellular Analysis” in order to more clearly describe the currently claimed invention. Applicant requests that the title on the Abstract page also be amended to correspond with the title as it is amended herein. Applicant respectfully requests that the Examiner acknowledge the change in the title in the next Office action (and that the amended title be reflected on the Corrected Official Filing Receipt requested above).

***Claim Rejections under 35 U.S.C. 112, second paragraph:***

Claims 1-44, 49, and 67-69 have been rejected under 35 U.S.C. 112, second paragraph because the claims allegedly are indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant traverses this rejection.

Claim 1 is rejected as indefinite because there allegedly is a lack of correlation between the stated purpose of the method and the end result of performing the steps of the method. Claim 1 has been amended to recite “thereby analyzing a biological specimen.” Applicant submits that amended claim 1 correlates the stated purpose of the method and the end result of performing the steps of the method. Claims 2-44 and 67-69 depend, directly or indirectly, from claim 1 and incorporate the amendment. Applicant respectfully requests that the Examiner withdraw this rejection.

Claim 1 also is rejected as indefinite because there allegedly is a lack of antecedent basis for the phrase “a pattern that is informative about the identification of the biological molecule.” Applicant has amended claim 1 to recite “informative about the biological molecule.” This amendment addresses the rejection and Applicant respectfully requests that this rejection of claim 1 be withdrawn.

Claim 24 is rejected as being allegedly indefinite in the recitation of “the component.” Claim 24 has been amended to recite “identifying the components of the specimen by determining which identification molecules the components interact with.” Amended claim 24 is

clear and definite, and Applicant respectfully requests that this rejection of claim 24 be withdrawn.

Claims 44 and 69 are rejected as allegedly being indefinite for the recitation of “the cellular specimen.” Claims 44 and 69 have been amended to recite “the biological” specimen(s). This amendment addresses the rejection and Applicant respectfully requests that the rejections of claims 44 and 69 be withdrawn.

Claim 49 is rejected as being allegedly indefinite for the recitation of “the cellular substrate.” Claim 49 has been amended to recite “the cellular specimen.” Applicant requests that this rejection of claim 49 be withdrawn in light of the amendment.

***Claim rejections under 35 U.S.C. 102***

***Englert et al. (Cancer Res. 60:1526-1530, 2000)***

Claims 1-10, 12-21, 24-30, 32-42, 44, 46-54, 67, and 69 are rejected under 35 U.S.C. 102(a) as anticipated by Englert *et al.* (Cancer Res. 60:1526-1530, 2000). Applicant traverses this rejection.

Applicant notes that Englert *et al.* (2000) was published on March 15, 2000, as shown on the first page of this publication. The subject application claims the benefit of U.S. Provisional Application Number 60/145,613, filed July 26, 1999. Applicant notes that the preliminary amendment filed January 24, 2002, which includes entry of the cross-reference to the U.S. Provisional Application in the specification, is acknowledged in the current Office action. As the U.S. Provisional Application predates Englert *et al.* (2000), this reference is not available as prior art. Applicant respectfully requests that the Examiner withdraw this rejection of claims 1-10, 12-21, 24-30, 32-42, 44, 46-54, 67, and 69.

***Imai (U.S. Patent Number 5,057,438; issued October 15, 1991)***

Claims 1, 2, 42, 44, 67, and 69 are rejected under 35 U.S.C. 102(b) as allegedly anticipated by Imai (U.S. Patent Number 5,057,438; issued October 15, 1991). Applicant traverses this rejection.

Applicant respectfully disagrees with the assertion that the method recited in claim 1 is disclosed in Imai. Imai discloses applying antibodies or antigens to different kinds of membranes (Imai, column 2, lines 19-22). In addition, Imai discloses analyzing biological specimens that are antibodies or antigens by applying the specimens to an electrolyte which is in contact with the membranes (Imai, column 2, lines 23-26).

In stark contrast, Applicant's method requires that the "location of each of the samples that was placed on the top layer [of the membranes] was substantially preserved and reproduced on the membranes through which the samples were transferred. Their substantial retention of spatial relationship conveniently allows the resulting *patterns* to be correlated with the original specimens" (specification at page 23, lines 25-29, emphasis added). Thus, the method generates "a *pattern* that is informative about the biological molecule" (amended claim 1, emphasis added).

As the antibodies or antigens in the biological sample disclosed in Imai are mixed *randomly* in an electrolyte solution and are then bound *randomly* to a membrane, the antibodies or antigens are not transferred to the membrane in any particular pattern that is reflective of the organization of the antibodies and antigens prior to their transfer to the membrane. Thus, Imai does not teach the generation of "a *pattern* that is informative about the biological molecule" and thus does not and cannot anticipate claim 1. Claims 2, 42, 44, 67, and 69 depend, directly or indirectly, from claim 1 and therefore incorporate all the limitations thereof. Applicant respectfully requests that this rejection of claims 1, 2, 42, 44, 67, and 69 be withdrawn.

***Claim rejections under 35 U.S.C. 103***

***Englert et al. (2000) in view of Englert et al. (Curr. Opin. Mol. Therap., 1(6):712-719, 1999)***

Claims 1 and 31 are rejected under 35 U.S.C. 103(a) as allegedly rendered obvious by Englert *et al.* (2000) in view of Englert *et al.* (*Curr. Opin. Mol. Therap.*, 1(6):712-719, 1999). Applicant traverses this rejection.

As discussed above, Englert *et al.* (2000) does not predate U.S. Provisional Application Number 10/048,194 and is not available as prior art.

Applicant notes that Englert *et al.* (1999) was published on January 6, 2000, as shown on page 14 of the attached list of articles published in Volume 1 of the journal *Current Opinion in Molecular Therapeutics* (Exhibit A). As discussed above, the subject application claims the benefit of U.S. Provisional Application Number 60/145,613, filed July 26, 1999, and the amendment entering the cross-reference to the U.S. Provisional Application is acknowledged in the current Office action.

As the U.S. Provisional Application predates both Englert *et al.* (2000) and Engert *et al.* (1999), neither of these references are available as prior art. In light of this, Applicant respectfully requests that this rejection be withdrawn.

***Englert et al. (2000) in view of Huang et al. (Anal. Biochem., 268:305-317, 1999)***

Claims 1, 43, and 68 are rejected under 35 U.S.C. 103(a) as allegedly rendered obvious by Englert *et al.* (2000) in view of Huang (Huang *et al.*, *Anal. Biochem.*, 268:305-317, 1999). Applicant traverses this rejection.

As discussed above, Englert *et al.* (2000) does not predate U.S. Provisional Application Number 10/048,194 and cannot be used as prior art. Thus, Englert *et al.* (2000) cannot be combined with Huang *et al.*

Huang *et al.* teaches at best a method for obtaining sequence information directly from mixtures or as an adjunct of peptide mass mapping to provide protein identification. Huang *et al.* does not disclose the generation of “a *pattern* that is informative about the biological molecule’s identity,” as required by Applicant’s current claims. Thus, Huang does not overcome the deficiencies of Englert *et al.* (2000). In light of these arguments, Applicant respectfully requests that this rejection be withdrawn.


### Conclusions

Based on the foregoing amendments and arguments, the claims are in condition for allowance and notification to this effect is requested. If for any reason the Examiner believes that a telephone conference would expedite allowance of these claims, please telephone the undersigned at (503) 595-5300.

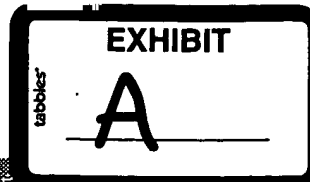
Respectfully submitted,

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### **Viral vectors for gene transfer into antigen presenting cells**

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### **FGF2-targeted adenoviral vectors for systemic and local disease**

**B Sosnowski, D L Gu, M D'Andrea, J Doukas, GF Pierce**

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### **RNA polymerase III-driven expression cassettes in human gene therapy**

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